been established in several ways. The graduates of the program continue to practice successfully in this State in both community and academic settings. In addition, the Residency Review Committee (RRC) for Pediatrics requires increasing amounts of community-based experience of pediatric trainees. Finally, Pediatric Education in Community Settings is the topic of an increasing number of papers and seminars.[4]

Ironically, many of our best clinical faculty are not well known in the hospital. These are physicians who have outstanding out-patient skills and keep their patients out of the hospital. The department hopes to maximize resident exposure to such clinicians. Of course, all clinical faculty are expected to impart their techniques on remaining current in their specialty to the residents.

The role of the clinical faculty in pediatric education is subject to constant evaluation, modification and improvement. The resident initiated faculty-resident retreat of 1997 is the first of what is hoped will be an ongoing process. The faculty must increasingly learn principles of adult education and improve on feedback mechanisms to validate continually the worth of its contributions to resident education.

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Military Medicine

Tragedy in Guam: One Doctor's Chronicle

Nathaniel B. Berg MD
Major U.S. Army
U.S. Naval Hospital Guam

In the early morning hours of August 6, 1997, I received a call that began in a manner well familiar. The physician on duty in the emergency room at U.S. Naval Hospital Guam (USNH, GU) called me to request an emergent non-contrast head CT. She was evaluating an elderly male who was found to be non-responsive and a cerebral vascular accident was thought the likely etiology. I asked a few questions about the case and told her I'd be on my way in as soon as I called the CT technologist. The routine nature of the scenario for the late night encounter with my colleagues in the emergency ended with her next declaration. She had just received report of a possible crash of a Boeing 747 passenger plane on Nimitz Hill. I live on the top of Nimitz Hill and had just fallen asleep when she called. I confidently informed her that no plane had crashed into Nimitz Hill. I surely would have awoken at the sound of such a disaster, particularly if one of the monstrous 747s that rumble over my house many times a day was involved. I called the CT technologist and dressed, with little thought of the tail end of my discussion with the ER. As I opened my back door the smell of jet fuel filled the air.

My route to the hospital takes me by a look-out in front of the last stand of the Japanese Imperial Army on Guam in World War II. The vista is usually of the non-inhabited, jungle-covered side of Nimitz Hill, as it slopes into a ravine. Through the light rain, the entire side of the hill seemed engulfed in flames. A Guam Police car had pulled over and an officer was standing in the road. As I approached his face spoke horrification. I stopped and realized that I was the only Radiologist for the hospital closest to a disaster the size of which I could only guess. I continued to the hospital. I provided visual confirmation of the crash and the entire hospital staff was recalled. The mass casuality drills we so diligently practice on Guam was now 'the real thing'. The crash site was difficult to access. The rescue effort was completed in a cooperative manner by the United States Military and local civilian fire and rescue personnel.

As the sole Radiologist I remained predominately in the Emergency Department. A barrage of requests were relayed from the five emergency department exam rooms. Order was made of the requests and films were completed and interpreted rapidly. The urgency to interpret a large number of films rapidly while continuing to coordinate the radiographic triage did not allow me to sit in a dark quiet room with my Dictaphone. I read the films standing at the ER view box with surrounding light and mass commotion, accented by agonizing screams. I gave verbal reports to the physicians, as a technologist wrote my opinion on the film jacker. CT scans were brought for interpretation by runners. We could not spare a portable machine for the intensive care unit. The few stable survivors had their needed X-rays completed in the Radiology department. The identification of patients by name was usually not possible. As practiced in our drills, all patients were assigned numbers as they entered the Emergency Department. This would prevent error in matching patient to films.

Two days following the crash I received another unique phone call. I was informed that I would need to complete X-rays on all of the remains of those who did not survive the crash. The exams would be needed to aid in identification of the victims and would possibly help in assessing the cause of the accident. The senior technologists and I inspected the temporary morgue to assess our unfamiliar task. An enormous warehouse had been partitioned into areas labeled intake, medical photography, personal effects, pathology, anthropology, finger prints, mortuary and data entry/processing. Beneath a sign labeled RADIOLOGY we were to set up shop. As explained by the National Disaster Management System (NDMS) and Disaster Medical Operations Readiness Team (D-Mort) team leaders, the body bags were brought from the crash site in refrigerated tractor trailers. They would be assigned a folder and would pass through each section. We were to open the bags, inspect the contents and complete appropriate radiographs. Anything that might aid in identification was to be recorded. The task was to be completed as rapidly as possible without compromise of information. I knew we would need off-island personnel and material resources to complete the task.

Building a radiology suite at the morgue site was not feasible. We would need three portable X-ray units. Two to run continuously while a third charged. A processor, a label flasher and light boxes

would need to be available. We borrowed portable units from Guam Memorial Hospital (GMH), requisitioned a bathroom for the processor, and took the rest of the equipment from our own hospital. If two units were to be running simultaneously, a large number of cassettes would be needed, including scoliosis cassettes. Tripler Regional Medical Center (TRMC) sent the cassettes and two near new portable units to allow return of the GMH units. Three technologists were needed for each machine. One to shoot and two to position and hold cassettes and remains. One person was needed in the darkroom and the another to keep order of the films and records. The heat in the warehouse and the nature of the work made obvious the need for frequent breaks. Several additional people would be needed. A team leader and a Radiologist for each shift added to the needed manpower. We were to work twelve hour shifts until the work was done. A call went out for assistance from the U.S. military facilities in the Pacific Rim.

Harlan Herr, CDR, MC, USN, Radiology Department Head at USNH, GU was on leave at the time of the accident and was on his way back. Technologists from the 121st U.S. Army General Hospital in Seoul, Korea and Naval Hospital Yokosuka, Japan arrived within 24-hrs. With the arrival of Commander John Maher, MC, USN from Naval Medical Center San Diego (NMCSD) we began our work at the morgue, while continuing to manage the Naval Hospital Guam Radiology Department. Terry Yeager, MAJ, MC, USAR came from TRMC with three technologists from his facility and two from Naval Clinic Pearl Harbor. More technologists were to arrive from NMCSD, Bremerton Naval Hospital and Naval Hospital Camp Pendelton allowing us to run a normal schedule at Naval Hospital Guam and crews at the morgue 24-hrs a day. CDR Robert Parkinson, a radiologist from NMCSD possessed Korean language skills that were to prove useful in comparing our exams to antemortum radiographs that arrived from Korea, and in communicating with Korean nationals.

The technologists and I shared a fear of the unknown. We knew that we would be seeing things that we all had hoped to live and die without seeing. Radiographing charred remains in various states of decomposition was not something we had chosen to do, and no one knew how we would react. The NDMS team leaders recommendations were later given to all of our team members. He advised us to focus on the importance of our work. Through high quality radiographs, remains could be quickly and accurately matched with available antemortum films. This would allow delivery of remains to loved ones. The possession of remains, no matter their condition, is essential to grieving and closure in virtually all cultures and religions. Our work would clearly help the families of the victims. Without our work, their suffering might be prolonged.

After a body bag was brought to our work area, we visually examined the contents of the bag. A scoliosis film was used to survey for radiodense components, personnel effects, and other non-human elements, e.g. aircraft parts, that were not seen on intake. Radiographs that might help in age or sex determination were completed. Typically, these included views of the ends of the long bones, hands, feet and spine if they were present. For matching to antemortum exams, we would attempt standard positioning of the

remains as for common clinical radiographs. Thus, if a skull was present, a paranasal sinus series and a skull series would be completed. Mastoid air cells and frontal sinuses have extraordinary variability and are excellent sources of X-ray matching. As views of the chest, wrist, ankle, cervical and lumbar spine are common, these were completed when possible. The scout scoliosis films often demonstrated unexpected findings, such as osseous structures from more than one victim. These were separated appropriately.

A group of psychiatrists, psychologists and social workers sent from NMCSD made up the U.S. Naval sprint team sent to provide psychological support. They were critical to help our teams working full time. They met with each individual at least once every three shifts and with the entire team as a group daily. We followed their advice to take short breaks every two hours, change our clothes before going home, refrain from eating in the warehouse and to look out for each other. To date, no team member has reported difficulty working or sleeping, nightmares, or other signs indicative of lasting adverse emotional consequences of the work completed. We X-rayed every single remain brought to the morgue. Even the smallest fragments were examined with an attempt to identify anatomic origin. The anthropologists would further examine the remains and not infrequently would ask for additional views of individual bones known to aid in age estimation. As explained to us, all efforts were to be made at identifying the remains including DNA testing of all remains not otherwise positively matched with a victim.

Several weeks later our job was complete. The Radiology team was made up of members from many different commands around the Pacific Rim. All became quickly focused on expediently and expertly doing everything we could to unite victim's remains with loved ones. This maintained the esprit of the teams quite high throughout. Many attributed the success of arduous work at the morgue site to military readiness training and attention to the preventive measures recommended by the NMCSD sprint team. We were proud to learn that many of our exams had been critical in identification of remains.

Major Berg is a Staff Radiologist assigned to U.S. Naval Hospital, Guam.

Book Reviews

All Stings Considered
First Aid and Medical Treatment of Hawaii's Marine Injuries
Craig Thomas MD and Susan Scott

Reviewed by Norman Goldstein MD

Craig Thomas MD, and emergency room physician, and Susan Scott, a registered nurse and marine science writer, have created a superb book in *All Stings Considered.* Their years of clinical experience and their participation in activities on, under, and around Hawaii's waters make them the authorities on marine injuries in Hawaii.

This compendium, well researched and well written, is easy for the general reader to understand and will be a handy reference for all water enthusiasts. It is also an excellent medical text for the health professional. No other book specifically addresses the Hawaii aquatic environment. The many articles on specific marine injuries that exist in the medical literature are difficult for the lay reader to obtain and understand.

Every emergency room and poison control center should have a copy of this book at hand. Paddling, sailing, and swimming clubs, along with high school and college athletic coaches, will use it for accident prevention and quick treatment. First responders, emergency physicians and staff, pediatricians, family practitioners, internists, and dermatologists will find it valuable as a speedy reference.

In their first joint publication effort, the authors have compiled a wealth of marine information.

Editor's Note: This is a must-have and must read for every health professional in Hawaii.

The Honolulu Heart Program, An Epidemiology Study of Coronary Heart Disease and Stroke

Reviewed by Roger L. White MD
Department of Cardiology
Straub Clinic & Hospital

It is my pleasure to review and recommend strongly the newly published book, **The Honolulu Heart Program, An Epidemiological Study of Coronary Heart Disease and Stroke** as edited by *Dr Abraham Kagan.* The Honolulu Heart Program study has gained international recognition over the past 30 years for its thorough and ongoing research and has become probably the second most frequently quoted study to the Framingham study on coronary artery disease from Massachusetts. As a practicing cardiologist in Honolulu, I have had many patients who have been enrolled in this study, as I am sure most clinicians in our community have been touched one way or another by this study. I have heard many of the authors speak at conferences over the years, and its is a pleasure to have the data all in one place in a book form. It is much welcomed.

The book is edited by Dr Abraham Kagan who has coordinated the efforts of 13 contributing editors. It is 204 pages, well organized and very readable. The Honolulu Heart Program has followed the epidemiology of coronary heart disease and stroke in 3,006 Hawaiian men of Japanese background for more than three decades. This is a monumental task of organization and persistence, and has yielded some very valuable data which we can all translate into our day-to-day care of patients in the prevention of heart attack and stroke. The most significant conclusion from this study was to confirm a gradient in coronary heart disease prevalence, incidence in mortality among Japanese males living in Japan, Honolulu and California, with the highest incidence of cornary artery disease being in California, the lowest in Japan, and moderate in Hawaii. The correlation with changes in diet and lifestyle with increased Westernization correlates very well. There is also confirmed a reverse gradient for the prevalence of stroke from the same three